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Job #08-207-P

April 16, 2008

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GEOLOGIC RECONNAISSANCE REPORT, 10-ACRE HILLSIDE PROPERTY (APN 239-360-08) PUEBLA STREET, ESCONDIDO, COUNTY OF SAN DIEGO

I. INTRODUCTION

The property investigated in this work is a 10-Acre hillside property located at the east terminus of Puebla Street, near the southern reaches of Escondido, County of San Diego. The site location is shown on a Regional Index Map enclosed wit this report as Plate 1. We understand your plans to subdivide the property into 4 lots for future residential development. Based upon a March 14, 2008 memorandum, the County Department of Planning and Land use is of the opinion that the project site is in an area of "landslide susceptibility" (DMG Category 3-1) and has therefore required a Geologic Reconnaissance Report as part of the development process. Consequently, this work was conducted to satisfy current County requirements and to outline conditions of slope stability at the project property.

Conclusions presented herein are based chiefly upon geologic mapping by the undersigned of surface exposures and a study of available technical literature and stereo graphic aerial photographs of the area. Site specific subsurface exploration has not been conducted and is recommended at a later date in connection with a detailed geotechnical study in support of planning site grading activities.

II. SITE CONDITIONS

Details of site topographic conditions are shown on a Geotechnical Map enclosed with this report as Plate 2. The property is dominated by natural north-south trending ridge terrain. Irregular slopes descend into south-draining canyons to the east and west at gradients that approach 2:1 (horizontal to vertical) at their steepest, overall. Locally steeper conditions are associated with hard rock outcrops and an old graded roadway along the east margin. The roadway provided access to the lower reaches of the property in support of previous orchard activities. Presently, upper surface areas of the site support a light cover of native grasses and some small trees. Recent clearing of the upper reaches of the property near Puebla Street have exposed surface soils.

Site drainage generally sheet flows into natural canyon terrain to the east and west. Standing water was noted in the east perimeter canyon which is also heavily overgrown with trees.

III. GEOTECHNICAL CONDITIONS

The project site is natural ridge terrain of the Peninsular Range geomorphic province underlain by crystalline bedrock units that are rooted in the southern California batholith. The following geotechnical conditions are apparent:

A. Earth Materials

Much of the project hillside is underlain by dark colored gabbroic rocks. These units are widely exposed in local hillside areas and are noted in old graded cuts above the unimproved grove road along the east margin. Noted exposures are weathered in the upper 5-10 feet and grade harder with depth. A red-colored sandy topsoil typically develops and mantles surface areas throughout the property.

Secondary intrusive rocks also occur at the site in prominent surface outcrops approximately as shown on Plate 2. A notable white colored quartz pegmatite extends across the upper reaches of the site and forms a tabular-shaped 3-5 foot thick dike structure. A second intrusion of quartz-bearing diorite is also present as shown. These rocks are characterized by a distinctive black color and are extremely hard.

Minor amounts of old fill soils are associated with the old grove road along the lower, east property margin. The dominant gabbroic bedrock unit at the site typically develops a reddish-colored sandy topsoil that mantles much of the site.

The indicated subsurface distribution of earth materials at the project site is shown on a Geologic Cross-Section enclosed with this report as Plate 3.

B. Geologic Structure / Slope Stability

Surface exposures of the dominant gabbroic bedrock beneath the project site indicate that massive conditions predominate. Limited joint/shear surfaces are present, however noted examples are discontinuous and steeply dipping. Secondary intrusive rocks crop out in bold exposures along the upper site terrain

approximately as shown on Plate 2. The exposures indicate that the rocks occur in tabular-shape dikes that are generally oriented north-south and dip to the east at a moderate to steep angle.
The dominant project bedrock unit is a massive crystalline intrusion that grades very hard below the upper weathered zone. The rocks do not express significant structure or other planes of weakness that could promote translational slope instability. Additionally, surficial soil instability or rockfall potential is not in evidence at the property.

C. Groundwater

Subsurface waterseeps are not apparent in surface site exposures and are not generally expected to impact future site development that will likely be limited to upper site areas. Surface water was noted within the lower canyon along the east margin which is expected to transmit additional drainage from offsite areas in response to rainfall.

V. CONCLUSIONS

Based upon the foregoing reconnaissance study, development of the project site is feasible from a geologic viewpoint. Significant geologic related hazards are not indicated at the site. Landslides or other forms of slope instability are not in evidence. Moreover, the property is underlain by hard crystalline bedrock units that characteristically perform well in slope conditions and are infrequently associated with "landslide areas". Additionally, surface bedrock exposures of the dominant gabbroic rock indicate that massive conditions predominate and that potential translational failure surfaces are not present.

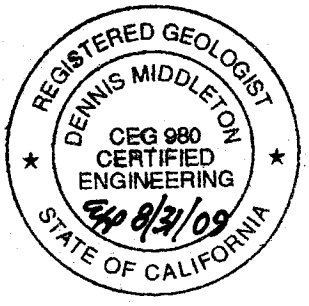
The most significant geotechnical factor associated with future residential development of the project site is the presence of very hard bedrock units and their excavation. The dominant gabbroic unit will excavate to moderate depths with conventional equipment and generate good quality soils suitable for compacted fills. However, secondary dike rocks (see Plate 2) are very hard units that will be difficult to excavate and will generate very rocky debris of limited use in compacted fills.

A subsequent geotechnical investigation of the property that includes test excavations, soil sampling and testing is recommended when development plans are available. The study should also include a hard rock evaluation that further delineates the extent and subsurface condition of hard rock units at the property.

This opportunity to be of service is sincerely appreciated. Should any questions arise concerning this report, please do not hesitate to contact this office. References to our job #08-207-P will help to expedite our response to your inquiries.

VINJE & MIDDLETON ENGINEERING, INC.

Dennis Middleton
CEG #980



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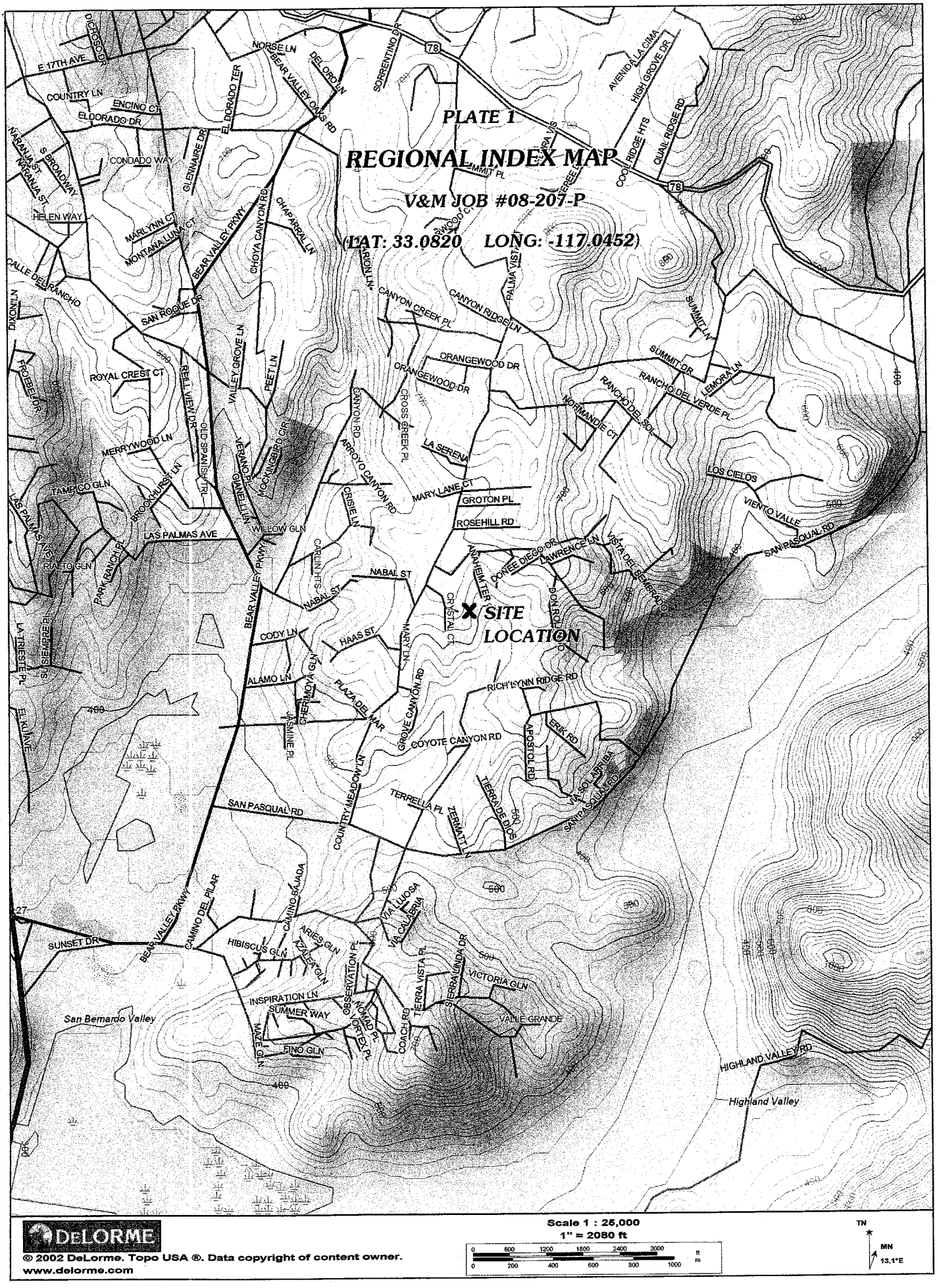
PLATE 1
REGIONAL INDEX MAP
V&M JOB #08-207-P
(LAT: 33.0820 LONG: -117.0452)
SITE LOCATION
E 17TH AVE
COUNTRY LN
ENCINO CT
ELDORADO DR
CONDADO WAY
HELEN WAY
MARILYNN CT
MONTANA LUNA CT
CALLE DEL RANCHO
SAN ROQUE DR
ROYAL CREST CT
PHOEBE DR
MERRYWOOD LN
TAMPICO GLN
LAS PALMAS AVE
RIALTO GLN
LA TRIESTE PL
SIENNA RD
EL KU AVE
SUNSET DR
HIBISCUS GLN
INSPIRATION LN
SUMMER WAY
FINO GLN
San Bernardo Valley
NORSE LN
BEAR VALLEY OAKS RD
DEL ORO LN
SORRENTINO DR
AVENIDA LA CIMA
HIGH GROVE DR
COOL RIDGE HTS
QUAIL RIDGE RD
SUMMIT PL
PALMA VISTA
CANYON CREEK PL
CANYON RIDGE LN
SUMMIT LN
SUMMIT DR
LEMORA LN
ORANGEWOOD DR
RANCHO DEL VERDE PL
RANCHO DEL SOL
NORMANDIE CT
LA SERENA
CROSS CREEK PL
CANYON RD
ARROYO CANYON RD
MARY LANE CT
GROTON PL
ROSEHILL RD
LOS CIELOS
VIENTO VALLE
SAN PASQUAL RD
DONEE DIEGO DR
LAWRENCE LN
VISTA DEL BEMBERADO
DON ROLANDO DR
ANAHEIM TER
CRYSTAL CT
NABAL ST
CODY LN
HAAS ST
ALAMO LN
CHERIMOYA GLN
JASMINE PL
PLAZA DEL MAR
GROVE CANYON RD
RICH LYNN RIDGE RD
ERIK RD
APOSTOL RD
COYOTE CANYON RD
VIA SOLAPPA
SAN PASQUAL RD
TERRELLA PL
ZERMATT
TIERRA DE DIOS
COUNTRY MEADOW LN
CAMINO DEL PILAR
CAMINO BAJADA
ARIES GLN
AZALEA GLN
OBSERVATION PL
VIA LUCOSA
VIA CALABRIA
TERRA VISTA PL
SIERRA LINDA DR
VICTORIA GLN
VALLE GRANDE
NOMAD PL
VORTEX PL
COACH RD
MAZEN GLN
HIGHLAND VALLEY RD
Highland Valley
BEAR VALLEY PKWY
CHOYA CANYON RD
CHAPARRAL LN
GLENNAIRE DR
EL DORADO TER
NARANJA ST
S BROADWAY
DIXON LN
PEEF LN
VALLEY GROVE LN
REELL VIEW DR
OLD SPANISH TRL
MOCKINGBIRD CIR
VERANO DR
CANNELLINI LN
WILLOW GLN
BROOKHURST LN
PARK RANCHO DR
CARLIN HTS
MARY LN
27
78
600
500
400
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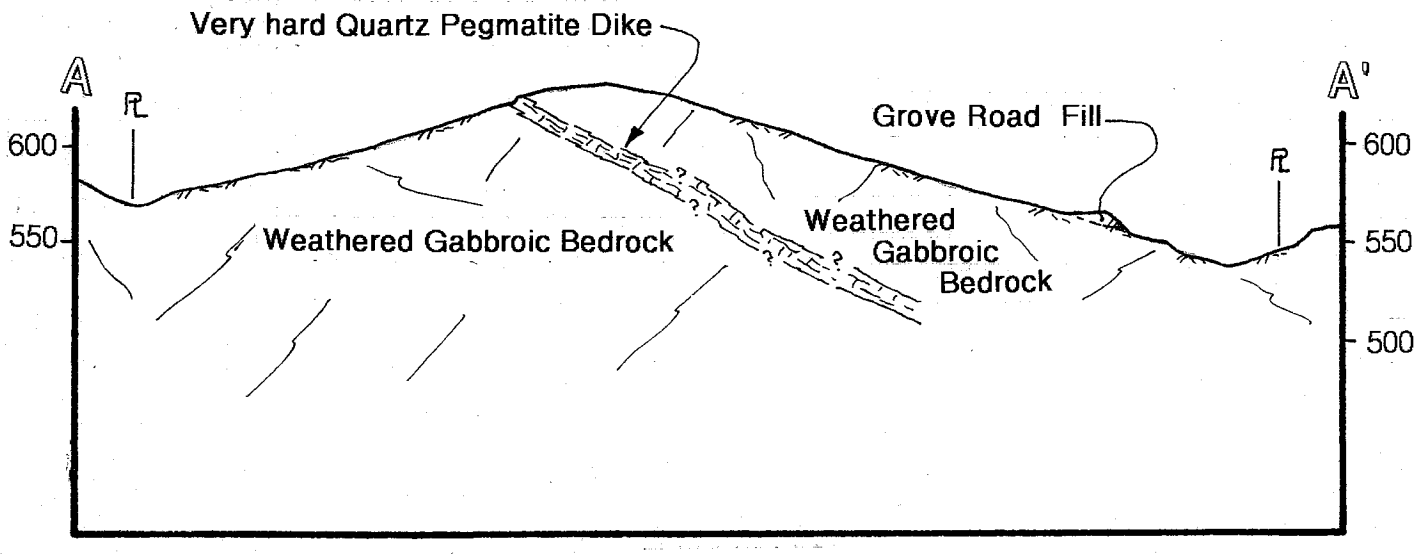
Scale 1 : 25,000
1" = 2080 ft
0 600 1200 1800 2400 3000 ft
0 200 400 600 800 1000 m
TN
MN
13.1°E


GEOTECHNICAL MAP
PUEBLA STREET PARCEL (APN 230-360-08) ESCONDIDO,
COUNTY OF SAN DIEGO
MARY LANE
PUEBLA STREET
682.0
663.0
661.0
600
GABBROIC BEDROCK
GROVE ROAD FILL
GEOLOGIC CROSS-SECTION LINE
A
A'
QUARTZ PEGMATITE DIKE
DIORITE INTRUSION
GABBROIC BEDROCK
587.0
N
PLATE 2
Map Scale: 1"=150'

GEOLOGIC CROSS-SECTION

PLATE 3



Scale: 1"=100'

REFERENCES

- California Department of Conservation, Division of Mines and Geology (California Geological Survey), 1986 (revised), Guidelines to Geologic and Seismic Reports: DMG Note 42

- California Department of Conservation, Division of Mines and Geology (California Geological Survey), 1986 (revised), Guidelines for Preparing Engineering Geology Reports: DMG Note 44.

- Tan S.S. and Kennedy, M.P., 1996, Geologic Maps of the Northwestern Part of San Diego County, California, Plate(s) 1 and 2, Open File-Report 96-02, California Division of Mines and Geology, 1:24,000

- "Geology and Mineral Resources of San Diego County California" California Divisions of Mines and Geology County Report 3, 1963.

- "Foundation Analysis and Design," Joseph E. Bowels.

- Caterpillar Performance Handbook, Edition 29, 1998

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